Gravity and Radiation Working Groups for the Europa Science Team

Introduction

NASA recently selected the science payload for the Europa Multiple Flyby mission and approved the mission to begin formulation. As part of the formulation effort, NASA seeks to form science working groups to provide guidance on using engineering subsystems and/or elements of the selected science instrumentation to conduct additional high priority science.

To that end, NASA is seeking individuals to serve on two working groups for gravity science and radiation science. The gravity and radiation groups will work with the project and the Europa science team to determine how engineering subsystems (specifically, the communications subsystem and the radiation monitoring subsystem), the selected instruments, and the overall mission architecture can be utilized under their existing and evolving designs to conduct investigations on the interior structure of Europa and the radiation environment present at the moon, respectively. Interested persons should send a curriculum vitae and a cover letter to Dr. Curt Niebur, the Europa Program Scientist (curt.niebur@nasa.gov) by July 27, 2015.

These two groups will join the Europa science team for the remainder of Phase A (approximately one year). Travel expenses to participate will be provided by NASA up to an appropriate level and consistent with regulation and policy. Near the end of Phase A, these working groups will be disbanded and NASA will competitively select permanent science team members in these areas. Members of the working groups will be eligible to compete for these permanent positions.

Gravity Science Working Group Charter

The Gravity Science Working Group (GSWG) will define and recommend to the science team science investigations related to understanding the response of the satellite to gravity, specifically, but not limited to, understanding the tidal distortion of Europa, its internal structure, precession, and moments of inertia. Carefully delineated measurement and mission requirements supporting these investigations will be defined by the GSWG, discussed with the full Europa science team and the project, and integrated with the mission's science. The GSWG will consider the capabilities of the selected science instruments, the communications subsystem, the tour, and other mission elements to evaluate, in a detailed manner, their ability (or inability) to meet the measurement and mission requirements necessary to support the defined gravity science investigation(s). The GSWG will consult with the Europa project office and the Europa science team to consider adjustments to mission elements that will enable the mission to meet the requirements for gravity science investigation(s), as needed. NASA appointees to the GSWG will serve as members of the Europa mission science team for the duration of their appointment only.

Radiation Working Group Charter

NASA appointees to the Radiation Science Working Group (RSWG) will define and recommend to the science team science investigations related to understanding the Europa radiation environment. Some members of the RSWG will join the existing Radiation Advisory Board created by the Europa project. As members of the RSWG, appointees will seek to define the science measurement capabilities provided by, and the broad science investigations enabled by, the mission's Radiation Monitoring Subsystem (RMS). The primary purpose of the RMS remains to monitor and preserve the health and safety of the spacecraft and the mission; the potential science enabled by the RMS will not be a driver for the subsystem design. In addition to serving on the RSWG, NASA appointees will also serve as members of the Europa mission science team for the duration of their appointment only.

Point of Contact:

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